

Partner

1641

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,747A

DATE: 09/28/1999
TIME: 14:25:17

Input Set: I210747A.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

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1 <110> APPLICANT: Briggs, Robert E.
2 Tatum, Fred M.
3 <120> TITLE OF INVENTION: Construction of Pasteurella Haemolytica Vaccines
4 <130> FILE REFERENCE: 295.77957
5 <140> CURRENT APPLICATION NUMBER: US/09/210,747A
6 <141> CURRENT FILING DATE: 1998-12-15
7 <150> EARLIER APPLICATION NUMBER: 08/643,299
8 <151> EARLIER FILING DATE: 1996-05-08
9 <150> EARLIER APPLICATION NUMBER: 08/162,392
10 <151> EARLIER FILING DATE: 1993-12-06
11 <160> NUMBER OF SEQ ID NOS: 6
12 <170> SOFTWARE: PatentIn Ver. 2.0
13 <210> SEQ ID NO 1
14 <211> LENGTH: 1556
15 <212> TYPE: DNA
16 <213> ORGANISM: Pasteurella cf. haemolytica
17 <400> SEQUENCE: 1
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19 aatcattttac gcattagtagt gcctttaccg caagaaaacg agagattttt tactgcctta 120
20 ttgaaagtgt tagcttaaca agcggttacc ttttatgaaa attttacaaa tttaaagaga 180
21 aaaatggaaa aactaacttt aaccccgatt tcccgagtag aaggcgagat caattttacct 240
22 ggttctaaaa gcctgtctaa ccgagcctta ttattagccg ccttagccac cggtagcact 300
23 caagtgacca atttattaga tagtgatgat attcgacata tgctcaatgc cttaaaagcg 360
24 ttaggcgtga aatatgagct atcggacgat aaaaccgtct gtgtacttga agggattggg 420
25 ggagctttta aggttcaaaa cggcttatca ctgtttctcg gcaatgcagg cacggcaatg 480
26 cgaccacttg cagcagcatt gtgtttaaaa ggtgaggaaa aatcccaaat cattcttacc 540
27 ggtgaaccaa gaatgaaaga acgcccgtatt aaacacttag tcgatgcttt acgccaagta 600
28 ggggcagagg tacagtattt agaaaatgaa ggctatccac cggttgcaat tagcaatagc 660
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31 gtatcaaaac cttatattga tattaccctt tcgatgatga acgattttgg tattacgggt 840
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34 attaaggcag gtaaagtaac gggcattggt aaaaaatcga tccaaggcga ccgcttggtt 1020
35 gccgatgtgt tggaaaaaat gggggcaaaa atcacttggg gagaggattt tattcaagcc 1080
36 gagcaatccc cgctaaaagg cgtagatatg gatatgaatc atattcctga tcgggcaatg 1140
37 acgattgcaa caaccgcttt atttgccgaa ggagaaacag ttatccgcaa tttttataac 1200
38 tggcgggtaa aagaaaccga ccgcttgaca gcaatggcaa ccgaattgcg taaagtcggg 1260
39 gcagaggtag aagaagggga agaaggggaa gattttattc ggattcaacc gcttgcggtt 1320
40 gaaaacttcc agcacgctga aattgaaacc tataacgac accgtatggc aatgtgtttt 1380
41 tcattaattg cgttatcgaa tacagaagtg acgatcttag atccaaattg taccgctaaa 1440
42 acgttcccga cttactttag ggacttgga aaattatcgg tcagataaaa gtaaaaaagg 1500
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44 <210> SEQ ID NO 2
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PAGE: 2

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,747A

DATE: 09/28/1999
TIME: 14:25:17

Input Set: I210747A.RAW

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45 <211> LENGTH: 434
46 <212> TYPE: PRT
47 <213> ORGANISM: Pasteurella cf. haemolytica
48 <400> SEQUENCE: 2
49 Met Glu Lys Leu Thr Leu Thr Pro Ile Ser Arg Val Glu Gly Glu Ile
50 1 5 10 15
51 Asn Leu Pro Gly Ser Lys Ser Leu Ser Asn Arg Ala Leu Leu Leu Ala
52 20 25 30
53 Ala Leu Ala Thr Gly Thr Thr Gln Val Thr Asn Leu Leu Asp Ser Asp
54 35 40 45
55 Asp Ile Arg His Met Leu Asn Ala Leu Lys Ala Leu Gly Val Lys Tyr
56 50 55 60
57 Glu Leu Ser Asp Asp Lys Thr Val Cys Val Leu Glu Gly Ile Gly Gly
58 65 70 75 80
59 Ala Phe Lys Val Gln Asn Gly Leu Ser Leu Phe Leu Gly Asn Ala Gly
60 85 90 95
61 Thr Ala Met Arg Pro Leu Ala Ala Ala Leu Cys Leu Lys Gly Glu Glu
62 100 105 110
63 Lys Ser Gln Ile Ile Leu Thr Gly Glu Pro Arg Met Lys Glu Arg Pro
64 115 120 125
65 Ile Lys His Leu Val Asp Ala Leu Arg Gln Val Gly Ala Glu Val Gln
66 130 135 140
67 Tyr Leu Glu Asn Glu Gly Tyr Pro Pro Leu Ala Ile Ser Asn Ser Val
68 145 150 155 160
69 Cys Arg Gly Gly Lys Val Gln Ile Asp Gly Ser Ile Ser Ser Gln Phe
70 165 170 175
71 Leu Thr Ala Leu Leu Met Ser Ala Pro Leu Ala Glu Gly Asp Met Glu
72 180 185 190
73 Ile Glu Ile Ile Gly Asp Leu Val Ser Lys Pro Tyr Ile Asp Ile Thr
74 195 200 205
75 Leu Ser Met Met Asn Asp Phe Gly Ile Thr Val Glu Asn Arg Asp Tyr
76 210 215 220
77 Lys Thr Phe Leu Val Lys Gly Lys Gln Gly Tyr Val Ala Pro Gln Gly
78 225 230 235 240
79 Asn Tyr Leu Val Glu Gly Asp Ala Ser Ser Ala Ser Tyr Phe Leu Ala
80 245 250 255
81 Ser Gly Ala Ile Lys Ala Gly Lys Val Thr Gly Ile Gly Lys Lys Ser
82 260 265 270
83 Ile Gln Gly Asp Arg Leu Phe Ala Asp Val Leu Glu Lys Met Gly Ala
84 275 280 285
85 Lys Ile Thr Trp Gly Glu Asp Phe Ile Gln Ala Glu Gln Ser Pro Leu
86 290 295 300
87 Lys Gly Val Asp Met Asp Met Asn His Ile Pro Asp Ala Ala Met Thr
88 305 310 315 320
89 Ile Ala Thr Thr Ala Leu Phe Ala Glu Gly Glu Thr Val Ile Arg Asn
90 325 330 335
91 Ile Tyr Asn Trp Arg Val Lys Glu Thr Asp Arg Leu Thr Ala Met Ala
92 340 345 350
93 Thr Glu Leu Arg Lys Val Gly Ala Glu Val Glu Glu Gly Glu Glu Gly
94 355 360 365

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PAGE: 3

RAW SEQUENCE LISTING
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95      Glu Asp Phe Ile Arg Ile Gln Pro Leu Ala Leu Glu Asn Phe Gln His
96          370                      375                      380
97      Ala Glu Ile Glu Thr Tyr Asn Asp His Arg Met Ala Met Cys Phe Ser
98          385                      390                      395                      400
99      Leu Ile Ala Leu Ser Asn Thr Glu Val Thr Ile Leu Asp Pro Asn Cys
100          405                      410                      415
101      Thr Ala Lys Thr Phe Pro Thr Tyr Phe Arg Asp Leu Glu Lys Leu Ser
102          420                      425                      430
103      Val Arg

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104 <210> SEQ ID NO 3
105 <211> LENGTH: 14
106 <212> TYPE: DNA
107 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Description of Artificial Sequence: Recognition
110      sequence of restriction enzymes PhaI and SfaNI in
111      the 5' to 3' orientation.

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112 <220> FEATURE:
113 <221> NAME/KEY: unsure
114 <222> LOCATION: (6)..(14)
115 <223> OTHER INFORMATION: The symbol n at positions 6 to 14 represents any
116      nucleotide.
117 <400> SEQUENCE: 3
118      gcatacnnnnnn nnnn
119

```

14

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119 <210> SEQ ID NO 4
120 <211> LENGTH: 14
121 <212> TYPE: DNA
122 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: Description of Artificial Sequence: Recognition
125      site for restriction enzymes PhaI and SfaNI in the
126      3' to 5' orientation.

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127 <220> FEATURE:
128 <221> NAME/KEY: unsure
129 <222> LOCATION: (6)..(14)
130 <223> OTHER INFORMATION: The symbol n at positions 6 to 14 represents any
131      nucleotide.

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132 <400> SEQUENCE: 4
133      cgtagannnnnn nnnn
134

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14

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134 <210> SEQ ID NO 5
135 <211> LENGTH: 31
136 <212> TYPE: DNA
137 <213> ORGANISM: Escherichia coli
138 <400> SEQUENCE: 5
139      ttcatggaat cccttgacgt tacaacccat c
140

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31

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140 <210> SEQ ID NO 6
141 <211> LENGTH: 25
142 <212> TYPE: DNA
143 <213> ORGANISM: Escherichia coli
144 <400> SEQUENCE: 6

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1641

PAGE: 4

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,747A

DATE: 09/28/1999
TIME: 14:25:17

Input Set: I210747A.RAW

145 aggctgcctg gctaataccgc gccag

25

PAGE: 5

VERIFICATION SUMMARY
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Line ? Error/Warning

Original Text

118 W "N" or "Xaa" used: Feature required

gcacnnnnnn nnnn

133 W "N" or "Xaa" used: Feature required

cgtagnnnnn nnnn